

# HAITONG MA

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## EDUCATION

<b>Harvard University</b> <i>PhD student in Engineering Sciences</i>	Aug. 2022 – Present Advisor: Prof. Na Li
<b>Tsinghua University</b> <i>Master of Engineering in Vehicle Engineering</i>	Aug. 2019 – June. 2022 Advisor: Prof. Shengbo Eben Li & Prof. Sifa Zheng
<b>Tsinghua University</b> <i>Bachelor of Engineering in Vehicle Engineering</i> <i>Bachelor of Management in Business Administration (Second Major)</i>	Aug. 2015 – July. 2019 Advisor: Prof. Sifa Zheng

## SELECTED HONORS AND AWARDS

L4DC Best Paper Award Finalists	2022
Outstanding Graduate of Tsinghua University	2022
Outstanding Master Thesis of Tsinghua University	2022
National Scholarship (Less than 1% in Tsinghua University.)	2021
Best Student Paper Award at 24th IEEE International Conference on Intelligent Transportation (ITSC)	2021
DiDi Scholarship of International Academic Communication Award	2020
Best Paper Award at 3rd IEEE International Conference on Unmanned Systems	2020
Huang Qianheng Scholarship of Comprehensive Excellence Award at Tsinghua University	2018
Scholarship of Social Work Excellence Award at Tsinghua University	2017
Outstanding Individual in Student Association at Tsinghua University	2017
Scholarship of Academic Excellence Award at Tsinghua University	2016
First Place in the 10th Honda Eco Mileage Challenge	2016

## SELECTED PUBLICATIONS

(\* means equal contribution)

7. **Haitong Ma**, Tianpeng Zhang, Yixuan Wu, Flavio P. Calmon, Na Li. Gaussian Max-value Entropy Search for Multi-Agent Bayesian Optimization. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2023. [\[Paper\]](#) [\[Video\]](#)
6. Dongjie Yu\*, **Haitong Ma\***, Shengbo Eben Li, Jianyu Chen. Reachability Constrained Reinforcement Learning. *Thirty-ninth International Conference on Machine Learning (ICML)*, 2022 [\[Paper\]](#) [\[Code\]](#)
5. **Haitong Ma**, Changliu Liu, Shengbo Eben Li, Sifa Zheng, Jianyu Chen. “Joint Synthesis of Safety Certificate and Safe Control Policy using Constrained Reinforcement Learning.” *The 4th Annual Learning for Dynamics & Control Conference (L4DC)*, 2022. **(Oral Presentation, Best Paper Award Finalists, 3/176)** [\[Paper\]](#) [\[Slides on MECC’21 workshop\]](#) [\[Talk at L4DC\]](#)
4. **Haitong Ma**, Jianyu Chen, Shengbo Eben Li, Ziyu Lin, Yang Guan, Yangang Ren, Sifa Zheng. “Model-based Constrained Reinforcement Learning using Generalized Control Barrier Function.” *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021. [\[Paper\]](#) [\[Code\]](#) [\[Video\]](#)

3. Yang Guan\*, Yangang Ren\*, **Haitong Ma**, Shengbo Eben Li, Qi Sun, Yifan Dai, Bo Cheng. "Learn collision-free self-driving skills at urban intersections with model-based reinforcement learning. *24th IEEE International Conference on Intelligent Transportation (ITSC)*, 2021. **(Best Student Paper Award, 2/597)** [\[Paper\]](#) [\[Video\]](#)
2. **Haitong Ma**, Xiangteng Zhang, Shengbo Eben Li, Yao Lyu, Sifa Zheng. "Feasibility Enhancement of Constrained Receding Horizon Control Using Generalized Control Barrier Function." *4th IEEE International Conference on Industrial Cyber-Physical Systems*, 2021. [\[Paper\]](#) [\[Slides\]](#)
1. **Haitong Ma**, Changliu Liu, Shengbo Li, Sifa Zheng, Wenchao Sun, Jianyu Chen "Learn Zero-Constraint-Violation Policy in Model-Free Constrained Reinforcement Learning." *IEEE Transactions on Neural Network and Learning Systems* (under second-round review), 2021. [\[Paper\]](#) [\[Video\]](#)

## ACADEMIC SERVICES

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Served as reviewer of IEEE Transactions on Automatic Control (TAC), Automatica, ICML, NeurIPS, ICLR, L4DC, CDC, ICRA, IROS, ITSC.

## SKILLS

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**Programming:** Python, Matlab, C++, Java, Julia

**Software and Platforms:** Linux, TensorFlow, PyTorch, OpenGL, Ray, Git, Matlab, Simulink, SUMO.

**Hobbies:** Badminton, Billiards, Sim-Racing.